

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A laminate coil for an integral n -phase motor (n is a natural number of 2 or more) having pluralities of coil poles formed by patterned conductor coils formed in a laminate constituted by pluralities of insulating layers, said laminate coil comprising input and output terminals formed on an outer surface of said laminate, a first connecting line connecting said input terminal to said coil poles, and second connecting lines series-connecting coil poles having the same polarity, said first and second connecting lines being formed by conductor patterns, and said coil poles being formed on pluralities of insulating layers sandwiched by said first and second connecting lines.

2. (original): The laminate coil according to claim 1, wherein the number of said coil poles is an integral multiple of n and equal in each phase.

3. (previously presented): The laminate coil according to claim 1, wherein n is 2 or 3.

4. (previously presented): The laminate coil according to claim 1, wherein it comprises a through-hole for receiving a rotation shaft and/or a bearing of a brushless motor substantially in a center portion of said laminate.

5. (original): The laminate coil according to claim 4, wherein said first connecting line comprises an annular conductor portion surrounding said through-hole, a first conductor portion connecting said annular conductor portion to said input terminal, and second conductor portions extending from said annular conductor portion and connected to said coil poles.

6. (previously presented): The laminate coil according to claim 1, wherein said input and output terminals and said first connecting line are formed on one main surface of said laminate.

7. (previously presented): The laminate coil according to claim 1, wherein each of said second connecting lines comprises two arcuate portions having different radii, and a radial portion connecting said two arcuate portions.

8. (currently amended): A laminate coil for an integral three-phase motor comprising pluralities of coil poles formed by patterned conductor coils in a laminate constituted by pluralities of insulating layers, said laminate being formed in the shape of a ~~flat rectangular~~ quadrangular plate, and each of one input terminal and three output terminals in a land grid array (LGA) or a ball grid array (BGA) being formed at four different corners on the same main surface of said laminate.

9. (previously presented): The laminate coil according to claim 1, wherein said coil poles are constituted by connecting coils formed on pluralities of insulating layers such that they overlap in a lamination direction, said coil being constituted by at least a first coil wound clockwise from inside to outside and a second coil wound clockwise from outside to inside, said first and second coils being connected via through-holes formed in said laminate, whereby said first and second coils have the same winding direction.

10. (previously presented): The laminate coil according to claim 1, wherein different-phase coil poles are arranged around a motor shaft at an equal angular interval.

11. (original): The laminate coil according to claim 10, wherein coil poles having the same polarity are arranged at rotationally symmetric positions of 180° around a rotation center of said motor shaft.

12. (previously presented): The laminate coil according to claim 1, wherein said coils are fan-shaped spiral coils each having an open angle of 55° or less with said motor shaft as a center.

13. (previously presented): The laminate coil according to claim 1, wherein said laminate is made of low-temperature co-fired ceramic, and formed by laminating and burning green sheets having conductor patterns.

14. (previously presented): The laminate coil according to claim 1, wherein conductor patterns of coils of the same phase are laminated in a staggering manner.

15. (previously presented): The laminate coil according to claim 1, wherein the main surface of said laminate coil is coated with an overcoat glass.

16. (previously presented): A brushless motor comprising the laminate coil of claim 1 as a stator, said laminate coil being arranged such that it opposes a rotor comprising a permanent magnet having different magnetic poles alternately via a magnetic gap.

17. (previously presented): A brushless motor comprising the laminate coil of claim 1 as a stator, said brushless motor comprising first and second rotors comprising a permanent magnets having alternately different magnetic poles, and said first and second rotors being arranged such that they oppose to each other with a magnetic gap via said laminate coil.

18. (previously presented): The brushless motor according to claim 16, further comprising an electric signal controller for periodically supplying electric current to each of different-phase coil poles of said laminate coil.

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19. (previously presented): The brushless motor according to claim 17, further comprising an electric signal controller for periodically supplying electric current to each of different-phase coil poles of said laminate coil.